CALIFORNIA PHYSICAL FITNESS TEST 2001

REPORT TO THE GOVERNOR AND LEGISLATURE

PREPARED BY THE CALIFORNIA DEPARTMENT OF EDUCATION
STANDARDS AND ASSESSMENT DIVISION
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California Physical Fitness Test
Report to Governor and Legislature
2001

Executive Summary

In the spring of 2001, physical fitness testing was conducted in California for students in grades 5, 7, and 9. The test that was used was the *Fitnessgram*. The *Fitnessgram* uses criterion-referenced standards to evaluate fitness. These standards represent a level of fitness that offers some degree of protection against diseases that result from sedentary living. Achievement of the fitness standards is based upon a test score falling in the Healthy Fitness Zone (HFZ). Since each of the six tasks measures a different aspect of fitness, and the fitness standard (HFZ) represents minimal levels of satisfactory achievement on the tasks, a student must meet all of the fitness standards before he or she is considered fit.

The results of the test indicate that most students at all three grade levels are not fit when compared to standards established for the *Fitnessgram* by the Cooper Institute for Aerobics Research. Full and complete public access to the data will be available via the Internet in December 2001, providing reports for the state, county, district, and school levels.

Results from the 1999 physical fitness tests were reported for 1,039,449 students compared to 1,172,329 students in 2001. Approximately 90 percent of school districts submitted data in 2001 which was an increase of 32 percent from 1999. The increase in district participation resulted in a 13 percent increase in students tested. The results indicate that there were no major changes between 1999 and 2001 physical fitness test results. However, there was an increase from 20 percent to 23 percent in the number of students that are considered fit.

Those students that were tested in grades 5 and 7 in 1999 were the same group of students tested in grades 7 and 9 in 2001. The number of students that achieved 6 of 6 fitness standards in 7^{th} grade increased 5 percent from 5^{th} grade results in 1999. In addition, the number of students that achieved 6 of 6 standards in 9^{th} grade remained the same as the 7^{th} grade results in 1999. The percentage of female and male students who achieved 6 of 6 standards increased in grades 5, 7, and 9. Ninth grade males, who increased by 4.5 percent from 1999, achieved the greatest improvement.

Both males and females from all ethnic backgrounds could benefit from a greater emphasis on all areas of physical fitness, especially aerobic capacity, body composition, upper body strength, and flexibility. Districts and schools are encouraged to use the data from this test to examine their physical education programs and plan improvements in their current programs. The child who is physically educated is more likely to be academically motivated, alert and successful.

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Introduction

In the spring of 2001, physical fitness testing was conducted in California for students in grades 5, 7, and 9. The test that was used was the *Fitnessgram*. This report summarizes the results of the 2001 testing and provides a summary comparison with the results from 1999.

Background

Assembly Bill (AB) 265, signed into law in October 1995 (Education Code Section 2, Chapter 6. Section 60800) re-established the statewide physical performance test and mandated that:

> "…during the month of March, April, or May, the governing board of each school district maintaining any of grades five, seven and nine shall administer to each pupil in those grades the physical performance test designated by the State Board of Education."

AB 265 also required that the physical fitness testing data be collected at least once every two years. In February 1996, the State Board of Education designated the *Fitnessgram* as the required physical performance test to be administered to California students.

Senate Bill (SB) 896, approved in 1998, further required the California Department of Education (CDE) to report results to the Governor and Legislature at least once every two years. Beginning in spring 2001, CDE will be collecting and reporting data every year. This report was intended to standardize data, track the development of high-quality fitness programs, and compare the performance of California's pupils to national norms on an annual basis.

All students in the specified grades were expected take the physical fitness test, regardless of whether they were in a physical education class or not. Students who were physically unable to take the entire physical fitness test were to be given as much of the test as conditions permitted.

Description of Test

The *Fitnessgram* was developed by the Cooper Institute for Aerobics Research in Dallas, Texas and endorsed by the American Alliance for Health, Physical Education, Recreation, and Dance. The primary goal of the *Fitnessgram* program is to assist students in establishing physical activity as part of their daily lives. Because of this goal, *Fitnessgram* provides a number of

options for each performance task so that all students, including those with special needs, have the maximum opportunity to complete the test. This availability of options is especially important in measurement of body composition, which is the component of physical fitness that tends to be the most controversial due to assessment method. With additional alternatives for body composition measurement, districts were more comfortable completing that section of the fitness test.

Physical fitness consists of three components: 1) aerobic capacity, 2) body composition, and 3) muscular strength, endurance, and flexibility. To ensure thorough measurement of all three components, the *Fitnessgram* test is made up of the following six major fitness areas with several performance tasks for each.

Aerobic Capacity
- Pacer
- Mile Walk/Run
- Walk Test

Body Composition
- Percent Fat
- Body Mass Index

Abdominal Strength and Endurance
- Curl-up

Trunk Extensor Strength and Flexibility
- Trunk Lift

Upper Body Strength and Endurance
- Push-up
- Modified Pull-up
- Pull-up
- Flexed Arm Hang

Flexibility
- Back-saver Sit and Reach
- Shoulder Stretch

To complete the *Fitnessgram,* students were required to be tested in the following:
- One of the options from aerobic capacity;
- One of the options from body composition;
- The curl-up test;
- The trunk lift test;
- One of the options from upper body strength; and
- One of the options from flexibility.

A brief description of the major areas of *Fitnessgram* and the alternative tasks are included here.

Aerobic Capacity - This is perhaps the most important indicator of physical fitness and assesses the capacity of the cardiorespiratory system by measuring endurance.

> *The Pacer (Progressive Aerobic Cardiovascular Endurance Run)* This is a multi-stage fitness test set to music, which provides a valid, fun alternative to the customary distance run. It is strongly encouraged for students K – 3, but may be used for all ages. The objective is to run as long as possible back and forth across a 20-meter distance at a specified pace that gets faster each minute.

One Mile Walk/Run The objective is to walk and/or run a mile distance at the fastest pace possible.

Walk Test The objective is to walk a one-mile distance as quickly as possible while maintaining a constant walking pace the entire distance. This test is for students ages 13 and older. It is scored in minutes, seconds, and heart rate.

Body Composition - Body composition results provide an estimation of the percent of a student's weight that is fat in contrast to the "fat-free" body mass, muscles, bones, and organs.

Skinfold Measurements Measurements of the thickness of the skinfold on the back of the upper right arm and the inside of the right calf are taken using a device called a skinfold caliper. A formula is used to calculate percent body fat using these measurements.

Body Mass Index This test provides an indication of a student's weight relative to his or her height. Height and weight measures are inserted into a formula and a body mass index number is calculated. Although not as accurate an indicator of body composition, districts and schools find this measurement less controversial than skinfold measurements.

Abdominal Strength and Endurance - Abdominal strength and endurance are important in promoting good posture and correct pelvic alignment. Strength and endurance of the abdominal muscles are important in maintaining low back health.

Curl-up Test The objective of this test is to complete as many curl-ups as possible up to a maximum of 75 at a specified pace.

Trunk Extensor and Flexibility - This test is related to low back health and vertebral alignment.

Trunk Lift The objective of this test is to lift the upper body a maximum of 12 inches off the floor using the muscles of the back and hold the position to allow for the measurement.

Upper Body Strength and Endurance - This test measures the strength and endurance of the upper body and is related to maintenance of correct posture. It is important to have strong muscles that can work forcefully and/or over a period of time.

Push-up The objective of this test is to complete as many push-ups as possible at a specified pace.

Modified Pull-up The objective of this test is to successfully complete as many modified pull-ups as possible.

Pull-up The objective of this test is to correctly complete as many pull-ups as possible.

Flexed Arm Hang The objective of this test is to hang with the chin above a bar as long as possible.

Flexibility - This test measures joint flexibility which is important to functional health.

Back Saver Sit and Reach The objective is to assess the flexibility of the lower back and posterior thigh. The student should be able to reach a specified distance while sitting at a sit-and-reach box. Both the right and left side of the body is measured.

Shoulder Stretch This is a simple test of upper body flexibility. The student should be able to touch the fingertips together behind the back by reaching over the shoulder and under the elbow.

The Standards

The *Fitnessgram* uses criterion-referenced standards to evaluate fitness performance. These standards were established by the Cooper Institute for Aerobics Research to represent a level of fitness that offers some degree of protection against diseases that result from sedentary living. Findings from current research based on the United States national norms have been used as the basis for establishing the *Fitnessgram* standards.

Performance is classified into two general areas: "in the healthy fitness zone (HFZ)" and "needs improvement." Appendix 1 provides a list of the standards for the HFZ. All students should strive to achieve a score within the HFZ. It is possible that some students score above the HFZ. These scores were included with students that had scored within the HFZ. For the purpose of this report, scores are reported as meeting the standard (falling in the fitness zone) or not meeting the standard (falling lower than the HFZ).

Data Collection

Statewide data collection in 2000-2001 was done electronically. Districts submitted their data to CDE by July 31, 2001, through the Internet, or by diskette, CD-ROM, data tape, or through e-mail. The data collection process put in place for this program is serving as a successful pilot of technologies that will be used in other parts of the state testing system.

Fitness test results will be reported via Internet in December 2001. These results will be presented by school, county, district, and state. The results will be available on CDE's Web site at www.cde.ca.gov/statetests/. No individual student data will be reported on Internet.

Participation in 2001 Testing

In the spring of 2001, the physical fitness test was taken by 90 percent of all fifth grade students, 86 percent of all seventh grade students, and 70 percent of all ninth grade students for a total of 1,172,329 students. This represents approximately 90 percent of school districts participating in physical fitness testing and is a remarkable increase of participation from 68 percent in 1998-99. Tables 1 and 2 present the gender and racial/ethnic composition of the student population participating in physical fitness testing.

Results of 2001 Testing

In Table 3, the overall results are reported in two ways. First, in Table 3 the percentage of students in the healthy fitness zone (HFZ) for each fitness task is reported. A student not in the healthy fitness zone indicates that the student has not met the minimum level of fitness for that fitness task. As this section of the table shows, for most of the fitness tasks, a significant percentage of students do not meet minimum fitness levels. A summary of this section of Table 3 follows:

- Aerobic capacity: across all grades, only 49-58 percent of students were in the HFZ;
- Body composition: across all grades, only 65-68 percent of students were in the HFZ;
- Abdominal strength: across all grades, 78-81 percent of students were in the HFZ;
- Trunk extension strength: across all grades, 82-86 percent of students were in the HFZ;
- Upper body strength: across all grades, only 62-63 percent of students were in the HFZ; and
- Flexibility: across all grades, only 64-69 percent of students were in the HFZ.

Table 4 reports achievement of six, five, four, three, two, one, or none of the six fitness standards. Achievement of the fitness standards is based upon a test score falling in the HFZ. Since each of the six tasks measures a different aspect of fitness, and since the fitness standard (HFZ) represents minimal levels of satisfactory achievement on the tasks, a student must meet all of the fitness standards before he or she is considered fit. Only students meeting six of six fitness standards can be considered fit for their grade level. Table 4 shows that most of the students tested are not fit: only 21 percent of grade five, 25 percent of grade seven, and 23 percent of grade nine students met six fitness standards. The rows in Table 2 that display the percentage of students achieving 5, 4, 3, 2, 1, or no standards indicate how much improvement is needed before the students can be considered fit.

Subgroup data are presented in Tables 5 - 15. Table 5 shows that at grades five and seven, more females than males met all six fitness standards, while at grade nine, more males than females did. Across all grade levels, more females than males were in the HFZ for flexibility, body composition, and trunk extension strength while more males than females were in the HFZ for abdominal strength and upper body strength.

No one racial/ethnic group exhibited high levels of fitness, but tables 9 – 15 show there are differences among ethnic groups and how these differences change over the grade levels. The

ethnic data indicates the Asian/Asian American subgroup had the highest number of students who met all of the fitness standards, while the Hispanic subgroup had the fewest.

Comparison of 1999 and 2001 Participation and Physical Fitness Test Results

Results from the 1999 physical fitness tests were reported for 1,039,449 students compared to 1,172,329 students in 2001. Approximately 90 percent of school districts submitted data in 2001 which was an increase of 32 percent from 1999. The increase in district participation resulted in a 13 percent increase in students tested. This remarkable increase can be attributed to:

- Increased training opportunities;
- Several options available for reporting data electronically;
- Increased visibility of the physical fitness test; and
- Follow-up letters sent to schools who failed to report data in 1999.

Table 17 shows there were no major changes between 1999 and 2001 physical fitness test results. However, there was an increase from 20 percent to 23 percent in the number of students that are considered fit. In addition, there was a decrease from 6.8 percent to 4.5 percent in the number of students that achieved 0 of 6 fitness standards.

Those students that were tested in grades 5 and 7 in 1999 were the same group of students tested in grades 7 and 9 in 2001. The number of students that achieved 6 of 6 fitness standards in 7^{th} grade increased 5 percent from 5^{th} grade results in 1999. In addition, the number of students that achieved 6 of 6 standards in 9^{th} grade remained static from 7^{th} grade results in 1999. The percentage of female and male students who achieved 6 of 6 standards increased in grades 5, 7, and 9. Ninth grade males, who increased by 4.5 percent from 1999, achieved the greatest improvement.

In summary, the results indicate that there are only minimal changes between the 1999 and 2001 physical fitness testing data and that a large percentage of students do not meet minimum fitness levels. However, given the large improvement in participation, differences in results between 1999 and 2001 should be given consideration when interpreting the data.

Tracking High-quality Fitness Programs

The 1999 physical fitness testing data should be considered baseline data, as it was the first time in nearly a decade that statewide collection and reporting of information about the fitness levels of students occurred. The results of 2001 testing provide a second year of data. Although it is not possible to identify a trend after only two years, the results have been compared and analyzed (see section above).

Identification of quality physical education programs has existed in California through the California Physical Education and Health Education Exemplary School award program and the California Association of Health, Physical Education, Recreation and Dance (CAHPERD.) The

addition of physical fitness data to the program criteria will serve only to enrich these two award programs.

Summary

Two years of data show that most students at all three grade levels are not fit when compared to standards established by the Cooper Institute for the *Fitnessgram*, a measurement of fitness levels which is used nationally. Although there was a 3 percent increase overall in number of students considered fit, there is still much work to do to ensure high levels of fitness for all students in California. Both males and females from all ethnic backgrounds could benefit from a greater emphasis on all areas of physical fitness, especially aerobic capacity, body composition, upper body strength and flexibility. Once again, districts and schools are encouraged to use the data from this test to examine their physical education programs and plan improvements in their current programs.

This is only the second time in twelve years that quality data about fitness of California's youth has been reported. Full and complete public access to these data will be available via Internet, providing reports for every county, district and school. Teachers, parents, and administrators will have the opportunity to examine the fitness levels of their children on an annual basis and use this information to make important changes. The child who is physically educated is more likely to be academically motivated, alert, and successful.

Implications for the California Department of Education

The 1999 physical fitness testing data should be considered baseline data, as this was the first time in nearly a decade that statewide collection and reporting of information about the fitness levels of students occurred. However, beginning in the spring 2001, CDE will be collecting and reporting data every year. The results are intended to standardize data, track the development of high-quality fitness programs, and compare the performance of California's students to national norms on an annual basis as well as over time.

In addition, schools are required to include physical fitness test results in their School Accountability Report Card. SB 1632 specifies that the most recent physical fitness data be reported, including the percent of students scoring in the healthy fitness zone on all six fitness standards. Data are to be reported for the school and includes district and statewide results for the purpose of comparison.

The physical fitness test results will provide physical educators with considerable information to make program changes to promote physical activity and fitness in the daily lives of their students.

2001 California Physical Fitness Test Data Tables

Table 1: Participation by Gender

Students Tested	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
Females	214,191	48.7	192,690	48.9	164,358	48.5
Males	223,448	50.8	199,217	50.6	173,089	51.1
No Gender Information	2,219	0.5	1,821	0.5	1,296	0.4

Table 2: Participation by Race/Ethnicity

Students Tested	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
African/African American	40,507	9.2	35,062	8.9	25,947	7.7
American Indian/Alaskan Native	6,752	1.5	6,235	1.6	4,908	1.4
Asian/Asian American	31,404	7.1	31,406	8.0	27,673	8.2
Filipino/Filipino American	12,109	2.8	11,376	2.9	9,643	2.8
Hispanic/Latino	177,664	40.4	150,514	38.2	126,840	37.4
Pacific Islander	4,864	1.1	4,865	1.2	4,059	1.2
White – Not of Hispanic Origin	144,709	32.9	133,139	33.8	117,936	34.8
Other	7,018	1.6	6,213	1.6	3,897	1.2
Non-Response	14,831	3.4	14,918	3.8	17,840	5.3

Table 3: Summary of Test Results

Physical Fitness Tests	Grade 5			Grade 7			Grade 9		
	Total Tested**	% in HFZ *	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	439,858	55.7	44.3	393,728	58.0	42.0	338,743	48.9	51.1
Body Composition	439,858	65.4	34.6	393,728	66.6	33.4	338,743	67.7	32.3
Abdominal Strength	439,858	78.2	21.8	393,728	80.8	19.2	338,743	79.2	20.8
Trunk Extension Strength	439,858	84.0	16.0	393,728	85.9	14.1	338,743	81.5	18.5
Upper Body Strength	439,858	62.0	38.0	393,728	61.9	38.1	338,743	62.7	37.3
Flexibility	439,858	63.8	36.2	393,728	68.6	31.4	338,743	67.6	32.4

Table 4: Summary of Fitness Standards Achieved

Number of fitness standards achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6 fitness standards	93,572	21.3	98,222	24.9	76,552	22.6
5 of 6 fitness standards	113,060	25.7	103,772	26.4	87,423	25.8
4 of 6 fitness standards	95,692	21.8	79,609	20.2	70,588	20.8
3 of 6 fitness standards	65,927	15.0	53,740	13.6	46,486	13.7
2 of 6 fitness standards	37,147	8.4	29,993	7.6	25,183	7.4
1 of 6 fitness standards	18,140	4.1	13,324	3.4	12,342	3.6
0 of 6 fitness standards	16,320	3.7	15,068	3.8	20,169	6.0
Total tested:	439,858	100.0	393,728	100.0	338,743	100.0

**Total Tested = number of students tested (includes partially tested students)

* HFZ = Healthy Fitness Zone

Table 5: Summary of Female Subgroup Results

Percent of FEMALES in HFZ for:	Grade 5			Grade 7			Grade 9		
	Total Tested**	% in HFZ *	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	214,191	55.9	44.1	192,690	59.0	41.0	164,358	43.5	56.5
Body Composition	214,191	73.6	26.4	192,690	72.1	27.9	164,358	69.3	30.7
Abdominal Strength	214,191	77.7	22.3	192,690	80.6	19.4	164,358	79.1	20.9
Trunk Extension Strength	214,191	84.7	15.3	192,690	86.9	13.1	164,358	82.6	17.4
Upper Body Strength	214,191	58.0	42.0	192,690	59.1	40.9	164,358	60.4	39.6
Flexibility	214,191	66.0	34.0	192,690	72.0	28.0	164,358	68.1	31.9

Table 6: Summary of Fitness Standards Achieved for Female Subgroup

Percent of FEMALES who achieved:	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6 fitness standards	46,869	21.9	49,713	25.8	33,381	20.3
5 of 6 fitness standards	56,464	26.4	52,377	27.2	42,493	25.9
4 of 6 fitness standards	47,671	22.3	39,581	20.5	36,567	22.2
3 of 6 fitness standards	31,460	14.7	25,656	13.3	24,127	14.7
2 of 6 fitness standards	16,973	7.9	13,302	6.9	12,601	7.7
1 of 6 fitness standards	8,204	3.8	5,879	3.1	5,970	3.6
0 of 6 fitness standards	6,550	3.1	6,182	3.2	9,219	5.6
Total tested:	214,191	100.0	192,690	100.0	164,358	100.0

Table 7: Summary of Male Subgroup Results

Percent of MALES in HFZ for:	Grade 5			Grade 7			Grade 9		
	Total Tested**	% in HFZ	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	223,448	56.0	44.0	199,217	57.5	42.5	173,089	54.2	45.8
Body Composition	223,448	58.1	41.9	199,217	61.8	38.2	173,089	66.4	33.6
Abdominal Strength	223,448	79.4	20.6	199,217	81.6	18.4	173,089	79.8	20.2
Trunk Extension Strength	223,448	84.1	15.9	199,217	85.4	14.6	173,089	80.9	19.1
Upper Body Strength	223,448	66.3	33.7	199,217	65.1	34.9	173,089	65.2	34.8
Flexibility	223,448	62.2	37.8	199,217	65.9	34.1	173,089	67.5	32.5

Table 8: Summary of Fitness Standards Achieved for Male Subgroup

Percent of MALES who achieved:	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6 fitness standards	46,650	20.9	48,440	24.3	43,089	24.9
5 of 6 fitness standards	56,489	25.3	51,291	25.7	44,802	25.9
4 of 6 fitness standards	47,904	21.4	39,920	20.0	33,888	19.6
3 of 6 fitness standards	34,373	15.4	27,992	14.1	22,283	12.9
2 of 6 fitness standards	20,099	9.0	16,611	8.3	12,548	7.2
1 of 6 fitness standards	9,886	4.4	7,423	3.7	6,355	3.7
0 of 6 fitness standards	8,074	3.6	7,540	3.8	10,124	5.8
Total tested:	223,448	100.0	199,217	100.0	173,089	100.0

**Total Tested = number of students tested (includes partially tested students)

* HFZ = Healthy Fitness Zone

Table 9: Summary of African/African American Subgroup Results

Percent of African/African American students in HFZ for:	Grade 5			Grade 7			Grade 9		
	Total Tested**	% in HFZ *	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	38,288	50.1	49.9	32,743	49.2	50.8	23,340	43.1	56.9
Body Composition	38,507	64.9	35.1	33,023	64.3	35.7	23,717	65.2	34.8
Abdominal Strength	37,330	77.5	22.5	31,981	76.6	23.4	22,672	76.0	24.0
Trunk Extension Strength	37,335	81.6	18.4	32,064	83.8	16.2	22,661	79.6	20.4
Upper Body Strength	34,289	63.5	36.5	29,564	61.4	38.6	21,490	62.2	37.8
Flexibility	36,428	59.4	40.6	31,867	62.8	37.2	22,941	63.8	36.2

Percent of African/African American students who achieved:	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6 fitness standards	6,974	17.2	6,566	18.7	4,584	17.7
5 of 6 fitness standards	10,260	25.3	8,853	25.3	6,458	24.9
4 of 6 fitness standards	9,507	23.5	7,620	21.7	5,720	22.0
3 of 6 fitness standards	6,687	16.5	5,684	16.2	4,124	15.9
2 of 6 fitness standards	3,904	9.6	3,373	9.6	2,407	9.3
1 of 6 fitness standards	1,789	4.4	1,630	4.6	1,306	5.0
0 of 6 fitness standards	1,386	3.4	1,336	3.8	1,348	5.2
Total tested:	40,507	100.0	35,062	100.0	25,947	100.0

**Total Tested = number of students tested in this category

* HFZ = Healthy Fitness Zone

Table 10: Summary of American Indian/Alaskan Native Subgroup Results

Percent of American Indian/Alaskan Native students in HFZ for:	Grade 5			Grade 7			Grade 9		
	Total Tested**	% in HFZ *	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	6,425	54.4	45.6	5,987	57.0	43.0	4,552	48.1	51.9
Body Composition	6,251	63.9	36.1	5,963	66.3	33.7	4,525	66.7	33.3
Abdominal Strength	6,067	76.1	23.9	5,635	78.1	21.9	4,160	77.7	22.3
Trunk Extension Strength	6,057	82.4	17.6	5,628	85.3	14.7	4,121	79.2	20.8
Upper Body Strength	5,451	60.5	39.5	5,129	60.9	39.1	4,046	64.2	35.8
Flexibility	6,394	67.3	32.7	5,638	68.7	31.3	4,264	65.9	34.1

Percent of American Indian/Alaskan Native students who achieved:	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6 fitness standards	1,420	21.0	1,649	26.4	1,171	23.9
5 of 6 fitness standards	1,737	25.7	1,639	26.3	1,255	25.6
4 of 6 fitness standards	1,467	21.7	1,143	18.3	954	19.4
3 of 6 fitness standards	950	14.1	771	12.4	596	12.1
2 of 6 fitness standards	486	7.2	392	6.3	326	6.6
1 of 6 fitness standards	426	6.3	196	3.1	164	3.3
0 of 6 fitness standards	266	3.9	445	7.1	442	9.0
Total tested:	6,752	100.0	6,235	100.0	4,908	100.0

**Total Tested = number of students tested in this category

* HFZ = Healthy Fitness Zone

Table 11: Summary of Asian/Asian American Subgroup Results

Percent of Asian/Asian American students in HFZ for:	Grade 5			Grade 7			Grade 9		
	Total Tested**	% in HFZ *	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	30,523	59.1	40.9	30,452	66.0	34.0	26,464	56.5	43.5
Body Composition	29,915	74.2	25.8	30,013	77.3	22.7	26,516	80.0	20.0
Abdominal Strength	30,221	83.5	16.5	30,262	86.7	13.3	26,159	86.8	13.2
Trunk Extension Strength	30,200	88.2	11.8	29,998	88.8	11.2	25,890	85.9	14.1
Upper Body Strength	27,664	68.6	31.4	27,880	70.5	29.5	25,011	72.2	27.8
Flexibility	29,837	72.9	27.1	29,911	79.1	20.9	26,317	77.9	22.1

Percent of Asian/Asian American students who achieved:	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6 fitness standards	8,480	27.0	10,758	34.3	8,346	30.2
5 of 6 fitness standards	9,203	29.3	9,423	30.0	8,470	30.6
4 of 6 fitness standards	6,818	21.7	5,746	18.3	5,771	20.9
3 of 6 fitness standards	3,935	12.5	3,067	9.8	2,908	10.5
2 of 6 fitness standards	1,810	5.8	1,365	4.3	1,215	4.4
1 of 6 fitness standards	647	2.1	547	1.7	428	1.5
0 of 6 fitness standards	511	1.6	501	1.6	535	1.9
Total tested:	31,404	100.0	31,406	100.0	27,673	100.0

**Total Tested = number of students tested in this category

* HFZ = Healthy Fitness Zone

Table 12: Summary of Filipino/Filipino American Subgroup Results

Percent of Filipino/Filipino American students in HFZ for:	Grade 5			Grade 7			Grade 9		
	Total Tested**	% in HFZ *	% Not In HF	Total Tested	% in HFZ	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	11,692	55.4	44.6	11,001	60.1	39.9	9,147	51.7	48.3
Body Composition	11,112	64.1	35.9	10,492	68.0	32.0	9,050	72.8	27.2
Abdominal Strength	11,445	81.5	18.5	10,716	83.7	16.3	8,780	82.0	18.0
Trunk Extension Strength	11,454	85.7	14.3	10,709	88.6	11.4	8,789	83.4	16.6
Upper Body Strength	10,546	68.1	31.9	9,949	69.0	31.0	8,436	70.5	29.5
Flexibility	11,641	71.5	28.5	10,861	76.9	23.1	8,952	74.2	25.8

Percent of Filipino/Filipino American students who achieved:	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6 fitness standards	2,810	23.2	3,307	29.1	2,531	26.2
5 of 6 fitness standards	3,304	27.3	3,215	28.3	2,785	28.9
4 of 6 fitness standards	2,744	22.7	2,334	20.5	1,969	20.4
3 of 6 fitness standards	1,740	14.4	1,327	11.7	1,176	12.2
2 of 6 fitness standards	843	7.0	642	5.6	574	6.0
1 of 6 fitness standards	369	3.0	237	2.1	236	2.4
0 of 6 fitness standards	299	2.5	314	2.8	372	3.9
Total tested:	12,109	100.0	11,376	100.0	9,643	100.0

**Total tested = number of students tested in this category

* HFZ = Healthy Fitness Zone

Table 13: Summary of Hispanic/Latino Subgroup Results

Percent of Hispanic/Latino students in HFZ for:	Grade 5			Grade 7			Grade 9		
	Total Tested**	% in HFZ *	% Not In HF	Total Tested	% in HFZ	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	170,332	53.1	46.9	142,703	52.9	47.1	114,195	43.1	56.9
Body Composition	171,409	59.5	40.5	143,612	60.5	39.5	116,216	62.4	37.6
Abdominal Strength	165,092	74.9	25.1	138,496	76.7	23.3	110,662	75.0	25.0
Trunk Extension Strength	165,346	82.8	17.2	138,375	84.1	15.9	110,618	79.7	20.3
Upper Body Strength	148,689	57.0	43.0	122,747	56.1	43.9	104,770	57.8	42.2
Flexibility	168,312	59.4	40.6	141,392	64.4	35.6	114,997	64.1	35.9

Percent of Hispanic/Latino students who achieved:	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6 fitness standards	28,556	16.1	28,105	18.7	21,864	17.2
5 of 6 fitness standards	42,310	23.8	36,128	24.0	29,525	23.3
4 of 6 fitness standards	40,796	23.0	33,006	21.9	27,859	22.0
3 of 6 fitness standards	31,188	17.6	25,115	16.7	20,832	16.4
2 of 6 fitness standards	19,188	10.8	15,232	10.1	12,549	9.9
1 of 6 fitness standards	9,041	5.1	7,053	4.7	6,689	5.3
0 of 6 fitness standards	6,585	3.7	5,875	3.9	7,522	5.9
Total tested:	177,664	100.0	150,514	100.0	126,840	100.0

**Total tested = number of students tested in this category

* HFZ = Healthy Fitness Zone

Table 14: Summary of Pacific Islander Subgroup Results

Percent of Pacific Islander students in HFZ for:	Grade 5			Grade 7			Grade 9		
	Total Tested**	% in HFZ *	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	4,650	52.5	47.5	4,616	51.6	48.4	3,761	37.5	62.5
Body Composition	3,808	48.8	51.2	3,858	49.9	50.1	3,060	50.9	49.1
Abdominal Strength	4,440	78.7	21.3	4,497	80.0	20.0	2,976	64.9	35.1
Trunk Extension Strength	4,478	84.6	15.4	4,484	84.1	15.9	2,972	66.6	33.4
Upper Body Strength	4,164	65.2	34.8	4,064	59.9	40.1	2,847	52.8	47.2
Flexibility	4,702	66.7	33.3	4,502	68.3	31.7	2,999	52.6	47.4

Percent of Pacific Islander students who achieved:	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6 fitness standards	916	18.8	813	16.7	652	16.1
5 of 6 fitness standards	1,148	23.6	1,252	25.7	813	20.0
4 of 6 fitness standards	1,120	23.0	1,151	23.7	738	18.2
3 of 6 fitness standards	832	17.1	803	16.5	521	12.8
2 of 6 fitness standards	414	8.5	427	8.8	274	6.8
1 of 6 fitness standards	243	5.0	156	3.2	165	4.1
0 of 6 fitness standards	191	3.9	263	5.4	896	22.1
Total tested:	4,864	100.0	4,865	100.0	4.059	100.0

**Total tested = number of students tested in this category

* HFZ = Healthy Fitness Zone

Table 15: Summary of White – Not of Hispanic Origin Subgroup Results

Percent of White – Not of Hispanic origin students in HFZ for:	Grade 5			Grade 7			Grade 9		
	Total Tested**	% in HFZ *	% Not In HF	Total Tested	% in HFZ	% Not In HFZ	Total Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	137,792	60.7	39.3	127,359	64.5	35.5	109,910	55.2	44.8
Body Composition	138,217	72.6	27.4	126,982	72.5	27.5	108,857	72.2	27.8
Abdominal Strength	135,826	81.9	18.1	125,390	85.6	14.4	105,948	83.7	16.3
Trunk Extension Strength	135,226	86.6	13.4	124,846	88.7	11.3	106,299	85.0	15.0
Upper Body Strength	124,482	66.4	33.6	114,295	66.6	33.4	101,053	66.6	33.4
Flexibility	137,895	68.3	31.7	126,242	72.3	27.7	108,316	70.6	29.4

Percent of White – Not of Hispanic origin students who achieved:	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6 fitness standards	40,152	27.7	41,942	31.5	32,965	28.0
5 of 6 fitness standards	39,868	27.6	37,920	28.5	32,736	27.8
4 of 6 fitness standards	28,869	19.9	24,518	18.4	23,249	19.7
3 of 6 fitness standards	17,645	12.2	14,334	10.8	13,585	11.5
2 of 6 fitness standards	8,992	6.2	7,139	5.4	6,463	5.5
1 of 6 fitness standards	4,992	3.4	2,926	2.2	2,770	2.3
0 of 6 fitness standards	4,191	2.9	4,360	3.3	6,168	5.2
Total tested:	144,709	100.0	133,139	100.0	117,936	100.0

**Total tested = number of students tested in this category

* HFZ = Healthy Fitness Zone

Table 16: Comparison of 1999 & 2001 Test Results

Physical Fitness Tests	Grade 5		Grade 7		Grade 9	
	1999 % in HFZ *	2001 % in In HFZ	1999 % in HFZ	2001 % in In HFZ	1999 % in HFZ	2001 % in HFZ
Aerobic Capacity	58.3	55.7	58.6	58.0	48.6	48.9
Body Composition	67.6	65.4	66.8	66.6	67.4	67.7
Abdominal Strength	80.0	78.2	81.6	80.8	79.5	79.2
Trunk Extension Strength	85.2	84.0	86.9	85.9	80.3	81.5
Upper Body Strength	62.5	62.0	60.7	61.9	60.5	62.7
Flexibility	64.7	63.8	70.0	68.6	69.8	67.6

Table 17: Comparison of 1999 & 2001 Fitness Standards Achieved

Number of fitness standards achieved	Grade 5		Grade 7		Grade 9	
	1999 %	2001 %	1999 %	2001 %	1999 %	2001 %
6 of 6 fitness standards	19.6	21.3	22.0	24.9	19.4	22.6
5 of 6 fitness standards	26.1	25.7	26.1	26.4	25.3	25.8
4 of 6 fitness standards	22.3	21.8	21.0	20.2	20.8	20.8
3 of 6 fitness standards	15.3	15.0	14.3	13.6	13.7	13.7
2 of 6 fitness standards	8.3	8.4	7.7	7.6	7.3	7.4
1 of 6 fitness standards	3.5	4.1	3.3	3.4	3.4	3.6
0 of 6 fitness standards	4.9	3.7	5.5	3.8	10.1	6.0

*HFZ= Healthy Fitness Zone

Table 18: Comparison of 1999 & 2001 Female Subgroup Results

Percent of FEMALES in HFZ for:	Grade 5		Grade 7		Grade 9	
	1999 % in HFZ*	2001 % in HFZ	1999 % in HFZ	2001 % in HFZ	1999 % in HFZ	2001 % in HFZ
Aerobic Capacity	57.9	55.9	58.3	59.0	42.5	43.5
Body Composition	74.3	73.6	70.9	72.1	68.8	69.3
Abdominal Strength	79.0	77.7	80.9	80.6	79.2	79.1
Trunk Extension Strength	85.5	84.7	87.5	86.9	81.5	82.6
Upper Body Strength	57.2	58.0	56.8	59.1	56.6	60.5
Flexibility	70.1	66.0	77.3	72.0	77.1	68.1

Table 19: Comparison of 1999 & 2001 Fitness Standards for Female Subgroup

Percent of FEMALES who achieved:	Grade 5		Grade 7		Grade 9	
	1999 %	2001 %	1999 %	2001 %	1999 %	2001 %
6 of 6 fitness standards	20.4	21.9	23.2	25.8	18.3	20.3
5 of 6 fitness standards	26.3	26.4	26.4	27.2	25.1	25.9
4 of 6 fitness standards	22.8	22.3	21.5	20.5	22.2	22.2
3 of 6 fitness standards	15.1	14.7	14.0	13.3	14.4	14.7
2 of 6 fitness standards	7.7	7.9	7.1	6.9	7.1	7.7
1 of 6 fitness standards	3.1	3.8	2.9	3.1	3.2	3.6
0 of 6 fitness standards	4.6	3.1	5.1	3.2	9.7	5.6

*HFZ= Healthy Fitness Zone

Table 20: Comparison of 1999 & 2001 Male Subgroup Results

Percent of MALES in HFZ for:	Grade 5		Grade 7		Grade 9	
	1999 % in HFZ*	2001 % in HFZ	1999 % in HFZ	2001 % in HFZ	1999 % in HFZ	2001 % in HFZ
Aerobic Capacity	58.6	56.0	58.8	57.5	54.4	54.2
Body Composition	61.2	58.1	62.8	61.8	66.0	66.4
Abdominal Strength	80.9	79.4	82.3	81.6	79.8	79.8
Trunk Extension Strength	85.0	84.1	86.3	85.4	79.1	80.9
Upper Body Strength	67.5	66.3	64.5	65.1	64.3	65.2
Flexibility	59.5	62.2	63.0	65.9	62.8	67.5

Table 21: Comparison of 1999 & 2001 Fitness Standards for Male Subgroup

Percent of MALES who achieved:	Grade 5		Grade 7		Grade 9	
	1999 %	2001 %	1999 %	2001 %	1999 %	2001 %
6 of 6 fitness standards	18.8	20.9	20.9	24.3	20.4	24.9
5 of 6 fitness standards	26.0	25.3	25.9	25.7	25.5	25.9
4 of 6 fitness standards	21.8	21.4	20.6	20.0	19.5	19.6
3 of 6 fitness standards	15.6	15.4	14.6	14.1	13.1	12.9
2 of 6 fitness standards	8.9	9.0	8.4	8.3	7.5	7.2
1 of 6 fitness standards	3.8	4.4	3.7	3.7	3.6	3.7
0 of 6 fitness standards	5.1	3.6	5.9	3.8	10.4	5.8

*HFZ= Healthy Fitness Zone

Appendix 1

FITNESSGRAM
Standards for Healthy Fitness Zone*

FEMALES

Age	One Mile min:sec	PACER # laps	VO 2max ml/kg/min	Percent Fat	Body Mass Index	Curl-up # completed
10	12:30 - 9:30	15 - 41	40 - 48	32 - 17	23.5 - 16.6	12 - 26
11	12:00 - 9:00	15 - 41	39 - 47	32 - 17	24 - 16.9	15 - 29
12	12:00 - 9:00	23 - 41	38 - 46	32 - 17	24.5 - 16.9	18 - 32
13	11:30 - 9:00	23 - 51	37 - 45	32 - 17	24.5 - 17.5	18 - 32
14	11:00 - 8:30	23 - 51	36 - 44	32 - 17	25 - 17.5	18 - 32
15	10:30 - 8:00	23 - 51	35 - 43	32 - 17	25 - 17.5	18 - 35
16	10:00 - 8:00	32 - 61	35 - 43	32 - 17	25 - 17.5	18 - 35

Age	Trunk Lift inches	Push-up # completed	Modified Pull-up # completed	Pull-up # completed	Flexed Arm Hang seconds	Back Saver Sit & Reach ** inches	Shoulder Stretch
10	9 - 12	7 - 15	4 - 13	1 - 2	4 - 10	9	Passing = Touching the fingertips together behind the back.
11	9 - 12	7 - 15	4 - 13	1 - 2	6 - 12	10	
12	9 - 12	7 - 15	4 - 13	1 - 2	7 - 12	10	
13	9 - 12	7 - 15	4 - 13	1 - 2	8 - 12	10	
14	9 - 12	7 - 15	4 - 13	1 - 2	8 - 12	10	
15	9 - 12	7 - 15	4 - 13	1 - 2	8 - 12	12	
16	9 - 12	7 - 15	4 - 13	1 - 2	8 - 12	12	

MALES

Age	One Mile min:sec	PACER # laps	VO 2max ml/kg/min	Percent Fat	Body Mass Index	Curl-up # completed
10	11:30 - 9:00	23 - 61	42 - 52	25 - 10	21 - 15.3	12 - 24
11	11:00 - 8:30	23 - 72	42 - 52	25 - 10	21 - 15.8	15 - 28
12	10:30 - 8:00	32 - 72	42 - 52	25 - 10	22 - 16.0	18 - 36
13	10:00 - 7:30	41 - 72	42 - 52	25 - 10	23 - 16.6	21 - 40
14	9:30 - 7:00	41 - 83	42 - 52	25 - 10	24.5 - 17.5	24 - 45
15	9:00 - 7:00	51 - 94	42 - 52	25 - 10	25 - 18.1	24 - 47
16	8:30 - 7:00	61 - 94	42 - 52	25 - 10	26.5 - 18.5	24 - 47

Age	Trunk Lift inches	Push-up # completed	Modified Pull-up # completed	Pull-up # completed	Flexed Arm Hang seconds	Back Saver Sit & Reach ** inches	Shoulder Stretch
10	9 - 12	7 - 20	5 - 15	1 - 2	4 - 10	8	Passing = Touching the fingertips together behind the back.
11	9 - 12	8 - 20	6 - 17	1 - 3	6 - 13	8	
12	9 - 12	10 - 20	7 - 20	1 - 3	6 - 13	8	
13	9 - 12	12 - 25	8 - 22	1 - 4	12 - 17	8	
14	9 - 12	14 - 30	9 - 25	2 - 5	15 - 20	8	
15	9 - 12	16 - 35	10 - 27	3 - 7	15 - 20	8	
16	9 - 12	18 - 35	12 - 30	5 - 8	15 - 20	8	

* Number on left is lower end of HFZ; number on right is upper end of HFZ.

** Test scored Pass/Fail; must reach this distance to pass.